

## CLAIMS

What is claimed is:

- 1           1.       A media adapter for coupling a networking device to a power line, the  
2 media adapter comprising:  
3           a physical layer to be coupled to the power line;  
4           a medium access control (MAC) layer in communication with the physical  
5 layer; and  
6           an inter-working unit in communication with the MAC layer, the inter-working  
7 unit to translate information from a first format into a second format differing from the  
8 first format to enable information to be received and transmitted over the power line.
- 1           2.       The media adapter of claim 1, wherein the power line is electrical wiring  
2 supporting an alternating current.
- 1           3.       The media adapter of claim 1, wherein the inter-working unit translates  
2 voice routed over at least one HomePlug frame into audio signals recognized by a Plain  
3 Old Telephone System (POTS) interface.
- 1           4.       The media adapter of claim 1, wherein the inter-working unit translates  
2 data routed over at least one HomePlug frame into data placed in an Ethernet frame.
- 1           5.       The media adapter of claim 4, further comprising a medium access  
2 control (MAC) layer and a physical layer to support Ethernet-based communications.
- 1           6.       The media adapter of claim 5, further comprising an access point  
2 coupled to the physical layer supporting Ethernet-based communications, the access  
3 point to transmit signal to the networking device over a wireless communication path.
- 1           7.       The media adapter of claim 1, wherein the inter-working unit translates  
2 voice routed over at least one HomePlug frame into radio frequency signals transmitted  
3 by a transceiver integrated within the media adapter.
- 1           8.       A network comprising:

an alternating current (AC) power line;  
a gateway in communication with the AC power line, the gateway including a first inter-working unit to translate information of a first format received from a remote source into information of a second format configured for transport over the AC power line; and  
a media adapter in communication with the AC power line, the media adapter including a second inter-working unit to translate the information of the second format into information of a third format.

9. The network of claim 8, wherein the information of the first format is data transmitted over any type of Digital Subscriber Line (xDSL).

10. The network of claim 9, wherein the information of the second format is data transmitted through one or more HomePlug frames.

11. The network of claim 10, wherein the information of the third format is data transmitted in accordance with an Ethernet format.

12. The network of claim 8, wherein the first inter-working unit is software executed by a processor that translates extracts payload data from a HomePlug frame and produces a packet for transmission in accordance with a Wireless Local Area Network (WLAN) standard.

13. A method comprising:  
receiving at least one frame containing information transmitted over a power line;  
extracting information from the frame, the information being in a first format;  
translating the information from a first format into a second format; and  
transmitting the information having the second format to a networking device.

14. The method of claim 13, wherein the frame is a HomePlug frame.

15. The method of claim 13, wherein the information is voice.

1           16.     The method of claim 13, wherein the information having the second  
2     format is at least one Ethernet packet that differs in data structure from the information  
3     having the first format.

1           17.     The method of claim 13, wherein the information having the second  
2     format is radio frequency (RF) signaling that differs in data structure from the  
3     information having the first format.

1           18.     The method of claim 13, wherein the power line is alternating current  
2     electrical wiring.

1           19.     A software stored in a machine readable medium for execution by a  
2     processor, the software module comprising:  
3           a first software module to recover information from an incoming frame routed  
4     over a power line, the information being in a first format;  
5           a second software module to translate multiple types of information from a first  
6     format into a second format; and  
7           a third software module to transmit the translated information having the second  
8     format to a networking device.

1           20.     The software of claim 19, wherein the second software module is  
2     adapted to translate both (i) data and (ii) voice carried over the power line.